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(54) Hard particles, wear resistant iron-based sintered alloy, method of producing wear resistant iron-based sintered alloy, valve seat, and cylinder head

(57) Hard particles are provided containing 20 to 70% of Mo, 0.5 to 3% of C, 5 to 40% of Ni, 1 to 20% of Mn, a balance in Fe, and impurities, where % represents percentage by mass, and may further contain at least one of 40% or less of Co, 0.1 to 10% of Cr, and 4% or less of Si. A wear resistant iron-based sintered alloy contains 4 to 30% of Mo, 0.2 to 3% of C, 1 to 20% of Ni, 0.5 to 12% of Mn, a balance in Fe, and impurities, with respect to the total mass of the iron-based sintered alloy as represented by 100%. In the sintered alloy, the base contains 0.2 to 5% of C, 0.1 to 12% of Mn, a balance in Fe, and impurities, with respect to the total mass of the base, and the hard particles contain 20 to 70% of Mo, 0.5 to 3% of C, 5 to 40% of Ni, 1 to 20% of Mn, a balance in Fe, and impurities, with respect to the total mass of the hard particles. The hard particles are dispersed in the base with an area ratio of 10 to 60%. A method to produce a wear resistant sintered alloy of the above composition is also provided.

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EUROPEAN SEARCH REPORT

Application Number
EP 00 12 7432

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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TECHNICAL FIELDS SEARCHED (Int.Cl.7)

C22C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	10 December 2003	Schruers, H

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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A : technological background
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T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
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